

FIG. 1
(PRIOR ART)

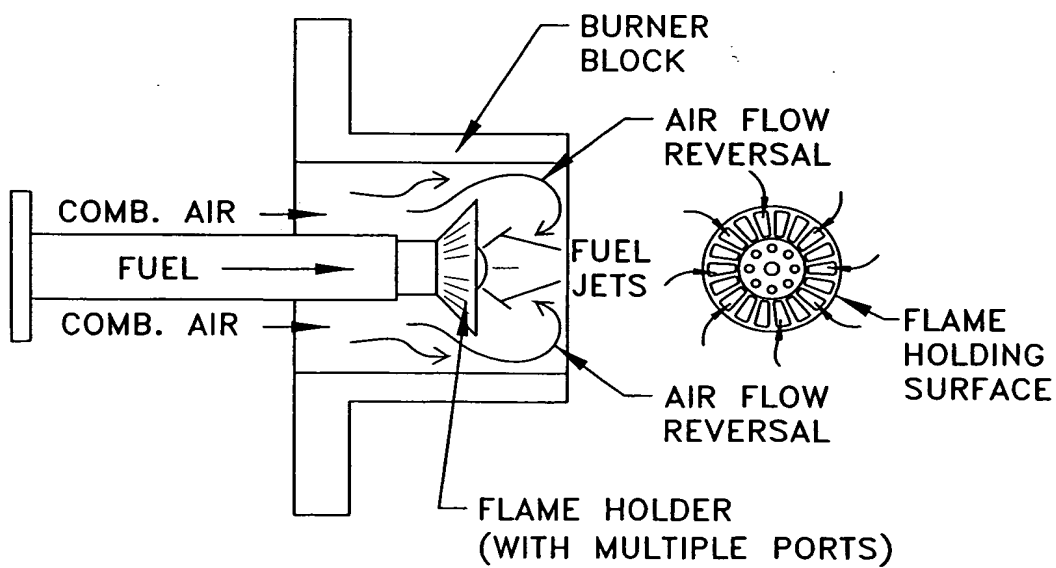
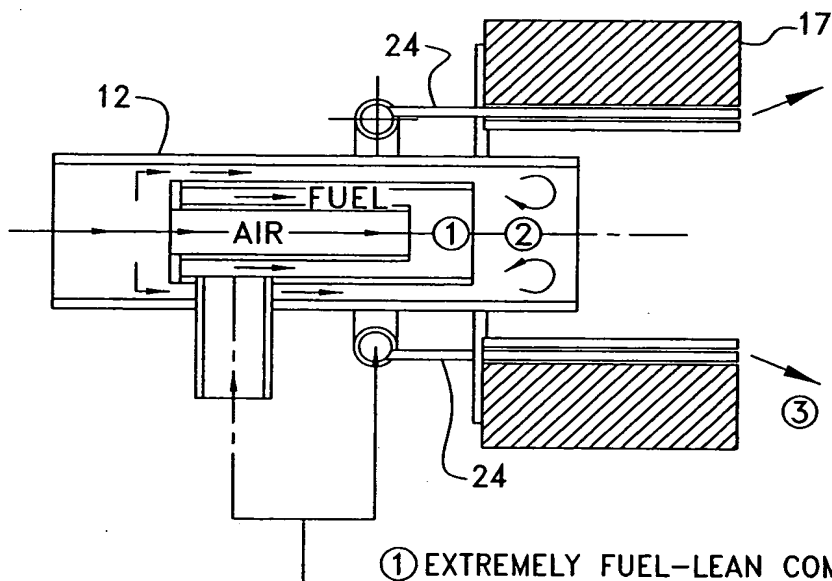
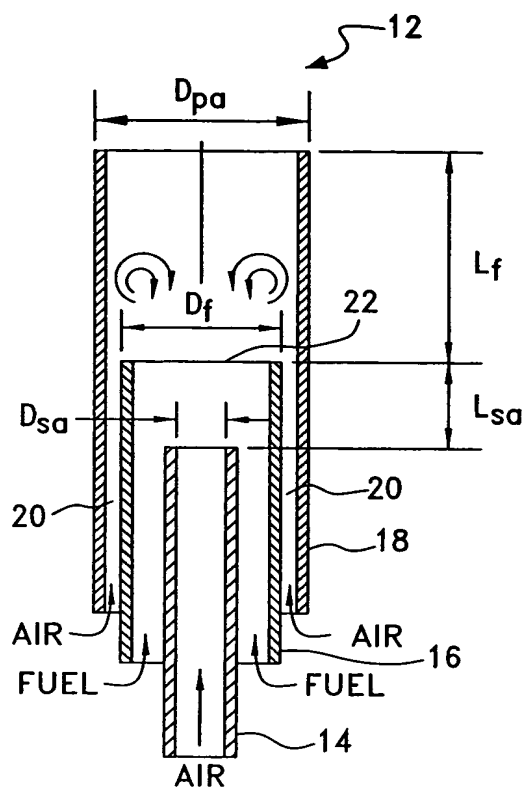


FIG. 2
(PRIOR ART)

FIG. 3



- ① EXTREMELY FUEL-LEAN COMBUSTION
- ② LARGE SCALE VORTEX (INTERNAL FGR)
- ③ FUEL STAGING

FIG. 5A

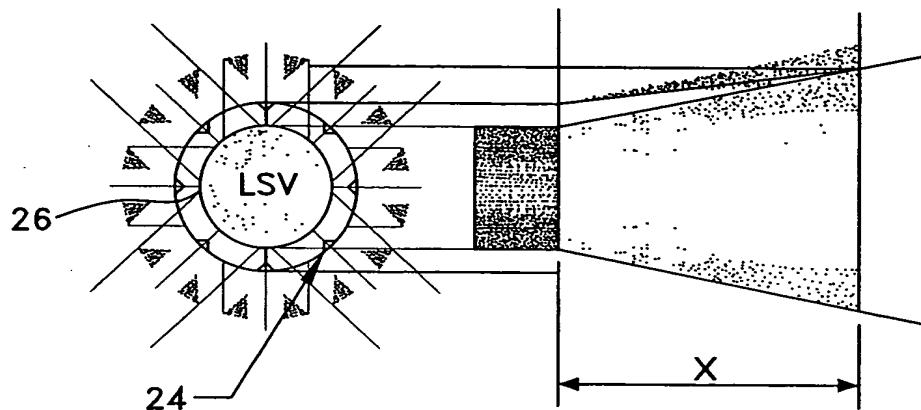


FIG. 6

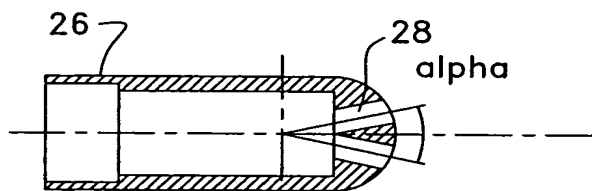


FIG. 7A

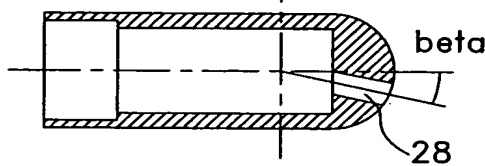


FIG. 7B

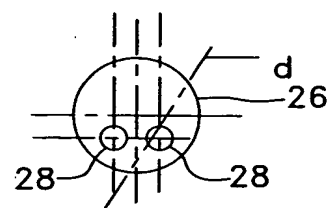


FIG. 7C

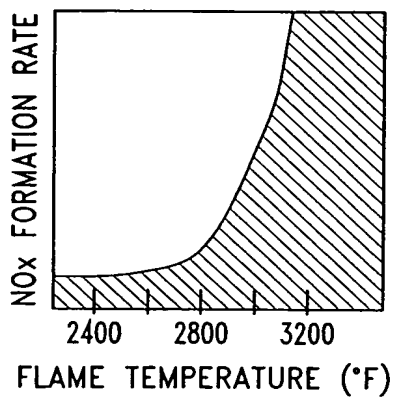


FIG. 4A

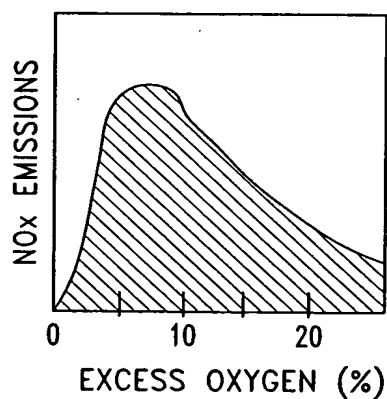


FIG. 4B

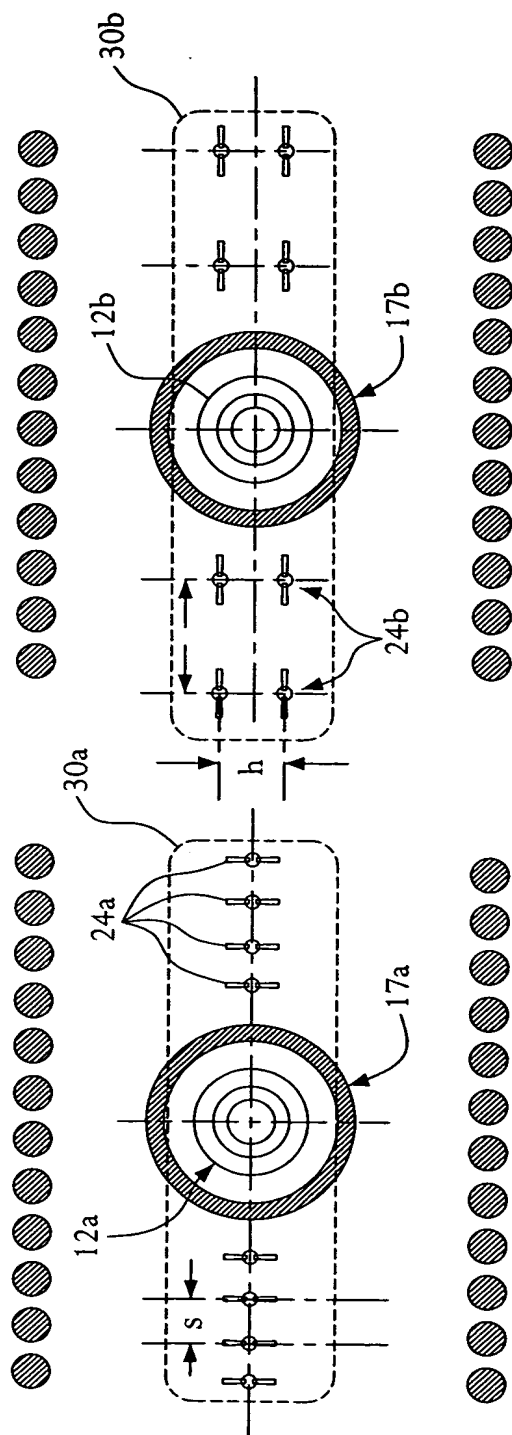


FIG. 5B

FIG. 5C

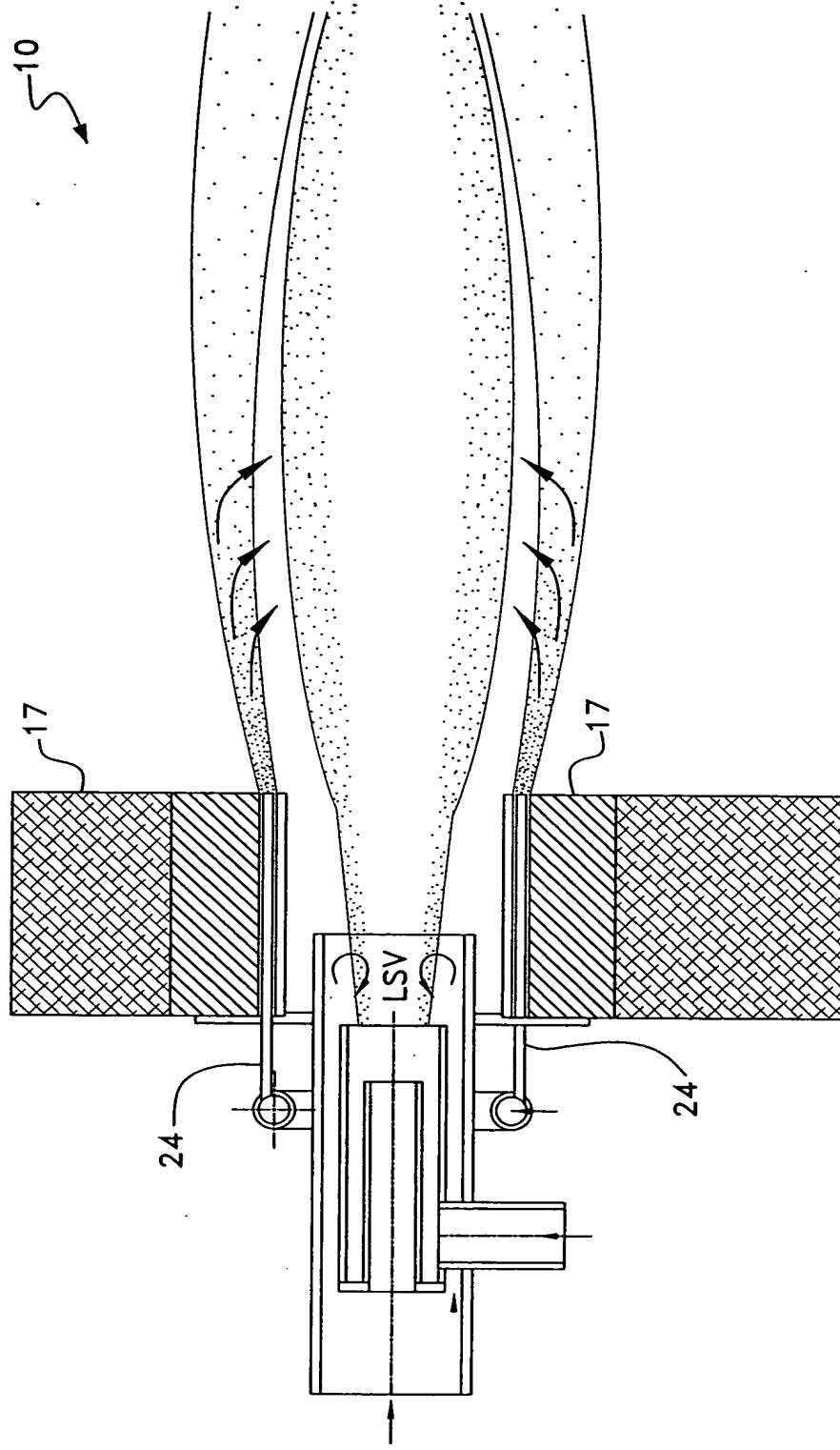


FIG. 8

005020 05423001

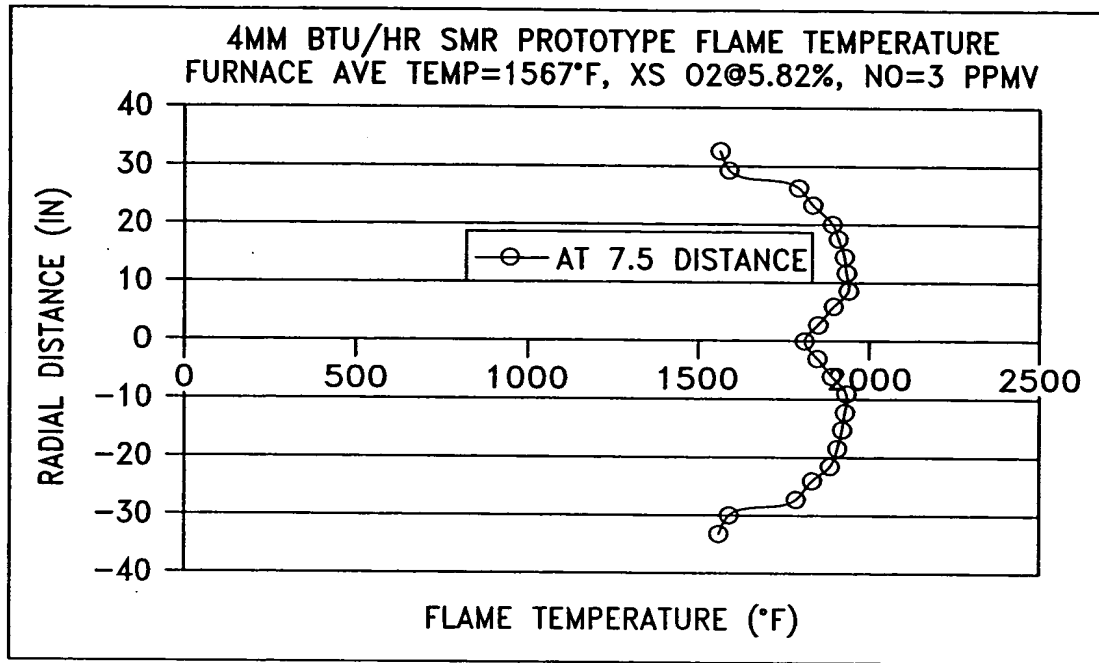


FIG. 10

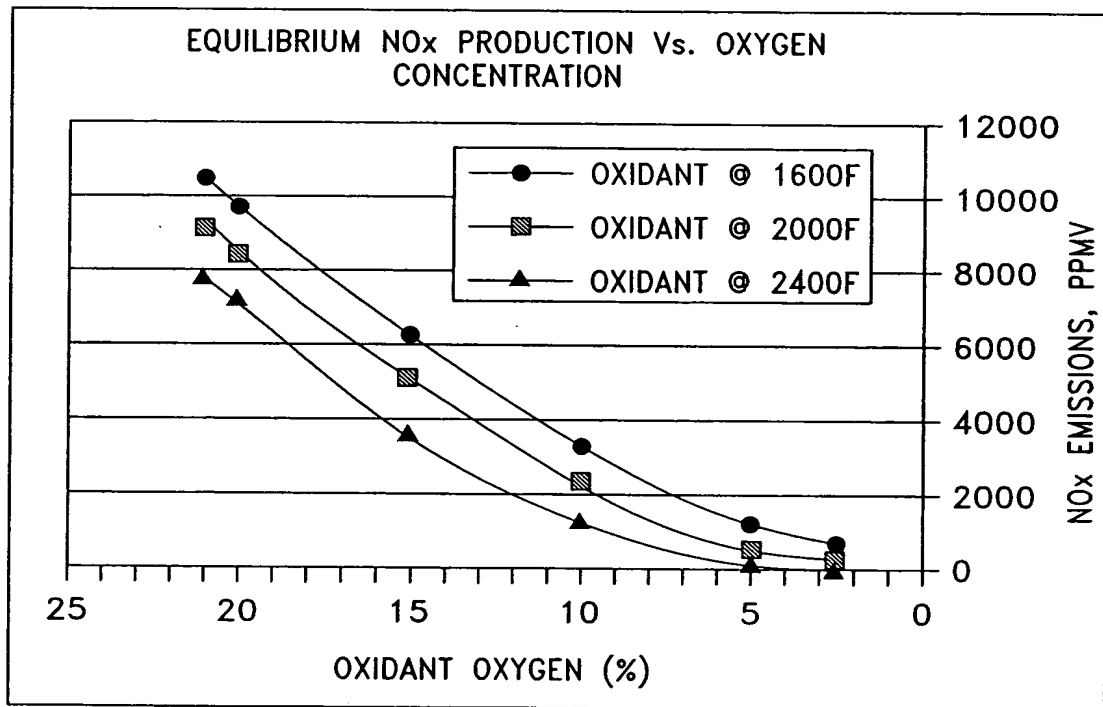


FIG. 9

Vertical Plane pointed to LSV

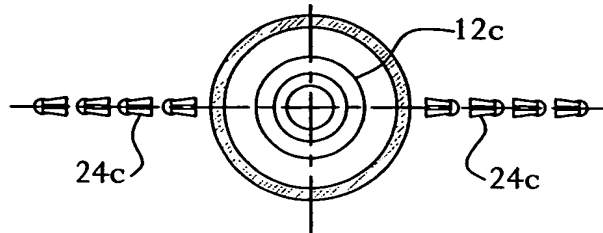


FIG. 11A

Firing Rate: 4 MM Btu/Hr
 Fuel Lances: 8, 2 holes/lance
 0.1094" ϕ , 15°/ 7°
 Fuel Prs: 4.75 psig; Air: 1.6 iwc
 Furnace Temp ~ 1499°F:
 O2=1.8%, CO=10ppm, NO=5 ppmv

Vertical Plane pointed to LSV

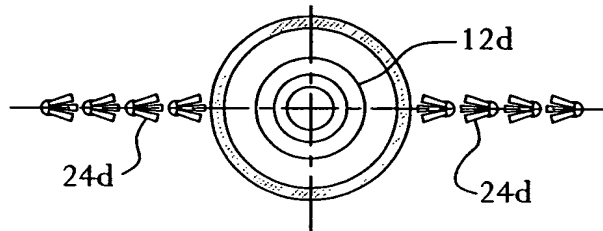


FIG. 11B

Firing Rate: 4 MM Btu/Hr
 Fuel Lances: 8, 3 holes/lance, 0.14,
 0.094" ϕ , 20°/ 7°/12°
 Fuel Prs: 3 psig; Air: 1.6 iwc
 Furnace Temp ~ 1566°F:
 O2=1.0%, CO=20ppm, NO=6 ppmv

Inclined Plane Straight Out

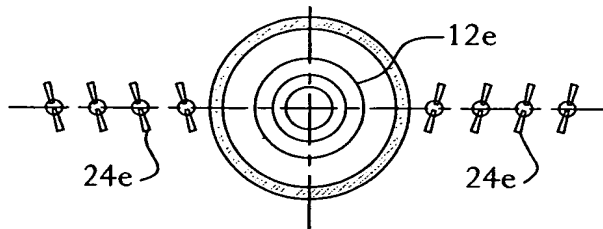


FIG. 11C

Firing Rate: 4 MM Btu/Hr
 Fuel Lances: 8, 2 holes/lance
 0.1096" ϕ , 15°, 20° inclin
 Fuel Prs: 5 psig; Air: 1.6 iwc
 Furnace Temp ~ 1500°F:
 O2=2.1%, CO=200ppm, NO=5 ppmv

Vertical Plane + Circular

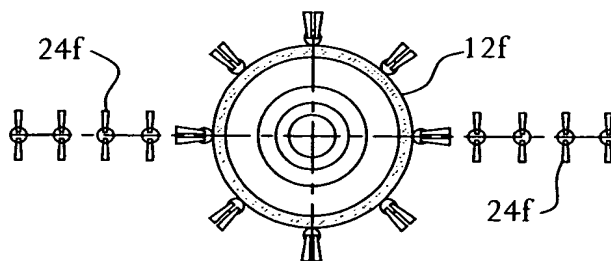


FIG. 11D

Firing Rate: 4 MM Btu/Hr
 Fuel Lances: 16, 2 holes/lance
 0.1096" ϕ , 7°, 15°
 Fuel Prs: 2.5 psig; Air: 1.6 iwc
 Furnace Temp ~ 1498°F:
 O2=1.5%, CO=25ppm, NO=6.5 ppmv

2025020 05423801

1005000 03425001

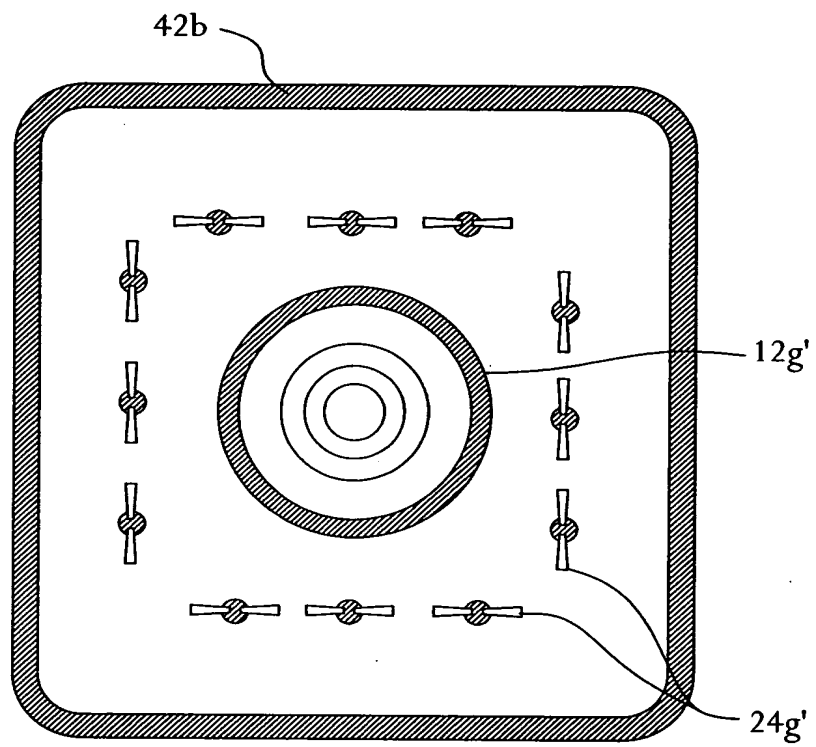


FIG. 12B

20250201 05423001

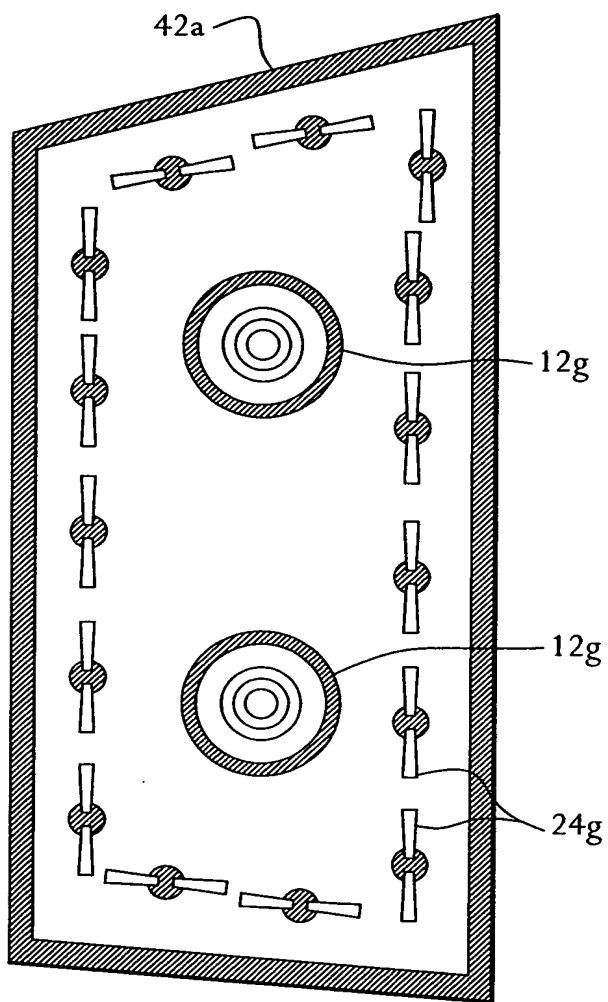


FIG. 12A

FIG. 13B

Figure 1 is a schematic diagram of a spray gun assembly. The assembly includes a handle (38) with four trigger mechanisms (12g) that control four spray nozzles (24g). These nozzles are positioned to spray material onto a large, irregularly shaped workpiece (32). A dashed line indicates a spray pattern (34) that covers the top portion of the workpiece.

FIG. 13A